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## Hugs are good for us. But when will they be safe?

The pandemic has deprived millions of a kind of physical contact that our brains are hard-wired to crave. Even as the pandemic eases, there won't be easy answers about when we can embrace again





Melanie Harvey, a nurse at the Hospital for Sick Children in Toronto, stands apart from her parents Ken and Mary Campbell, neither of whom have received a hug from her in months.

FRED LUM/THE GLOBE AND MAIL

The last time Melanie Harvey hugged her mom was nearly a year ago, on Mother's Day.

They met at a gardening centre to buy flowers, an annual tradition. They hadn't hugged since the start of the pandemic, but as they parted, Ms. Harvey wrapped her arms around her mom. She wasn't going to let Mother's Day go by without a hug.

What happened next surprised her. "We both started to cry," says Ms. Harvey, a registered nurse at the Hospital for Sick Children in Toronto. "I didn't realize how much I had missed the physical touch aspect of being close to people that you love."

With vaccination programs under way across the country and the return to normal edging tantalizingly closer, people are beginning to think about all the things they miss most. For many, hugging friends and family is at the top of that list. Unlike travel, a night out at a restaurant or so many of the other things we once took for granted, hugging satisfies a deeply human need for safety and affection.

"Hugs are something that are so primal for us as a species," says Frances Chen, a researcher at the University of British Columbia whose work focuses on how social relationships affect our physical health.

"It's just very natural for parents to be hugging their young children, so it's probably something you've associated with comfort your whole life."

She pointed out the many sentiments hugs communicate: comfort, affection, security, trust and longing. "There's a lot of symbolism in hugs."

Years ago, Dr. Chen worked as a research assistant at the Leipzig Zoo in Germany, where she studied primate behaviour.

The zoo separated chimpanzees into different groups at night. When they were reunited in the morning, Dr. Chen watched as they ran to hug one another.

"Maybe another part of the reason we give hugs and what we associate it with is reunions," she says.

During the COVID-19 pandemic, photographer Sumbul Rafi Khan started a conceptual documentary project about how physical distancing has changed the way we interact.

SUMBUL RAFI KHAN/THE GLOBE AND MAIL

The word hug comes from the Old Norse word "hugga," which means "to comfort."

Part of the sense of comfort we get from hugs is rooted in our physiology.

When we hug, pressure receptors under the skin send signals to the brain that activate the vagus nerve, the longest of all the cranial nerves.

"The vagus is responsible for slowing the heart rate, slowing blood pressure, and biochemically it slows the production of stress hormones," says Tiffany Field, director of the Touch Research Institute at the University of Miami's Miller School of Medicine.

Hugs also increase levels of oxytocin, the so-called love hormone.

Studies have shown that hugs can trigger a wide range of psychological and physical benefits, from boosting the immune system to making people less afraid of death.

In one 2018 study published in the journal PLoS One, researchers at the Laboratory for the Study of Stress, Immunity, and Disease at Carnegie Mellon University in Pittsburgh looked at how hugs can help people deal with interpersonal conflict. Researchers interviewed a group of 404 men and women every night for two weeks about their conflicts and whether or not they received hugs. The study found that those who were hugged were less affected by interpersonal conflict.

"It seems that physically affectionate touch like hugs seems to be a powerful reminder to people that they are cared for, that they belong to a social group, that they have this sort of social security," says Michael Murphy, one of the lead researchers of the study. "Those experiences increase our perceptions that we have people available to us, and that can make stressful experiences seem less threatening. Typically, we deal better with stress when we have good supports in place."

Another study has shown the "cascade" of physiological responses that flow from hugging, particularly lowering cortisol levels, improves our immune response to illness, Dr. Murphy says.

In a 2015 study conducted by his colleagues at Carnegie Mellon University, participants were exposed to a cold virus and then monitored in quarantine in a hotel, with one participant per room. The study found that people who reported feeling more socially supported and received more hugs before going into quarantine had less risk of infection. Those who did get sick and received more frequent hugs showed less severe symptoms.

The comfort of a hug might also soothe a person's sense of existential dread. In a series of studies published in the journal Psychological Science in 2013, researchers at Vrije Universiteit Amsterdam looked at how touch affected a person's anxiety about death. In one of the studies, participants who received a light, open-palmed touch on their shoulder blade reported less anxiety about death on a questionnaire than those who were not touched.

"Even fleeting and seemingly trivial instances of interpersonal touch may help people to deal more effectively with existential concern," lead researcher Sander Koole said in a release. Ela Gubbiotti hugs her partner, Giancarlo Vannimartini, through plastic sheeting at the Ospedale dei Castelli hospital in Ariccia, near Rome, this past January.

ALESSANDRA TARANTINO/THE ASSOCIATED PRESS

Carole Fitzgerald, a registered nurse who has been vaccinating seniors who receive home care in Vancouver, says her patients always talk about how much they are looking forward to hugging their grandchildren.

"Many of them have been so isolated from their families," she says. "There's just been this heightened excitement. Everybody is talking about how they can't wait to be hugging again."

Naomi Sayers, a lawyer who lives alone in Sault Ste. Marie, says she looks most forward to hugging her best friend. During a visit to Toronto in the fall, the friends went out for dinner. As they were saying goodbye, her friend suggested they hug.

"I said 'no," Ms. Sayers says. "'I don't think we can."

The thought of being able to hug without those worries almost makes her cry, she says.

At the outpatient oncology clinic at Credit Valley Hospital in Mississauga, patients who have completed their course of treatment ring a bell to mark a moment of triumph. Nurses at the clinic used to line up and hug the patient, but they haven't been able to since the pandemic began.

"We give air hugs, but it's not the same," says Nalini Mohamed, a registered nurse at the clinic.

She looks forward to being able to hug her patients again one day – and hugging her parents and her niece and nephew, both of whom were born during the pandemic. "It'll be emotional because everything is better and safe. It will be all happy tears."

Students at a New Delhi school mime hugs from their desks as classes reopen this past January.

ALTAF QADRI/THE ASSOCIATED PRESS

When will people be able to hug one another? There really is no answer yet.

There is a clear medical threshold to determine if it is safe for people to hug, and a murky social and moral threshold to determine whether they should, says Susy Hota, medical director of infection prevention and control at the University Health Network in Toronto.

"If you have two people who are fully vaccinated I think it would be safe for them to hug," she says.

Being fully vaccinated means having received both shots and waiting 14 days after receiving the second dose, Dr. Hota says.

Whether or not people who are fully vaccinated should hug when so many other people who are still waiting for the vaccine cannot is a much trickier question, Dr. Hota says. "What we're dealing with right now is more of an equity issue, a fairness issue, than anything else," she says.

In all likelihood that fairness issue won't be settled for several months.

"The kinds of policy changes that you'd want to make where you can say we can start stepping back on physical distancing, we can start stepping back on masking, it makes the most sense to do that once we get to a certain level of coverage and whatever that acceptable level of coverage is for a vaccination," Dr. Hota says. "That's yet to be determined."

While people who have been fully vaccinated may feel a strong urge to hug one another, doing so can carry a social stigma, especially because onlookers don't know if the people hugging are vaccinated or flouting public health guidelines.

Kirsten Lewis, a nurse practitioner in Toronto, hugged another nurse on her last day at her previous job back in January. Both were fully vaccinated at the time, but they shocked the people around them who didn't know that.

"Everybody was like, 'What are you doing?" Ms. Lewis says. She has not hugged a co-worker since.

At a gathering with friends recently, outdoors and physically distanced, Ms. Lewis and a few other health care workers half-jokingly talked about how they could safely hug each other. But they decided against it, since it would be unfair to the other people in the group who had yet to receive the vaccine.

Whenever it is safe and socially acceptable, it is likely that not everyone will be racing to hug people, says Dr. Field.

Many people were not huggers before the pandemic and many others will likely be wary of close physical contact, she says. "I think there will be two extremes. Some people will be hugging everyone in sight and some people will be backing off."

As for Ms. Harvey, she is biding her time. "As much as I want to go and hug my parents and my friends, I'm actively treating positive patients," she says.

Whenever the time comes, however, it will mark a moment of safety and closeness she has not experienced in a very long time.

"It just comes down to the basic need for human connection," she says.

Ms. Harvey says she's looking forward to hugging her parents and friends when the time is right.

FRED LUM/THE GLOBE AND MAIL

Jessica Shaw, a radio host in New York City, has heard her 80-year-old mother Evelyn cry many times.

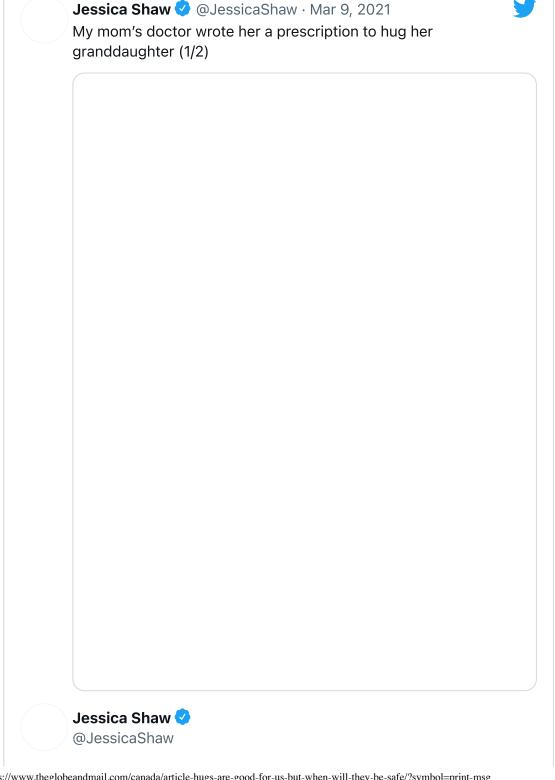
"My father died, and I know how she cried when he died. I know how she cried when her parents died," Ms. Shaw says.

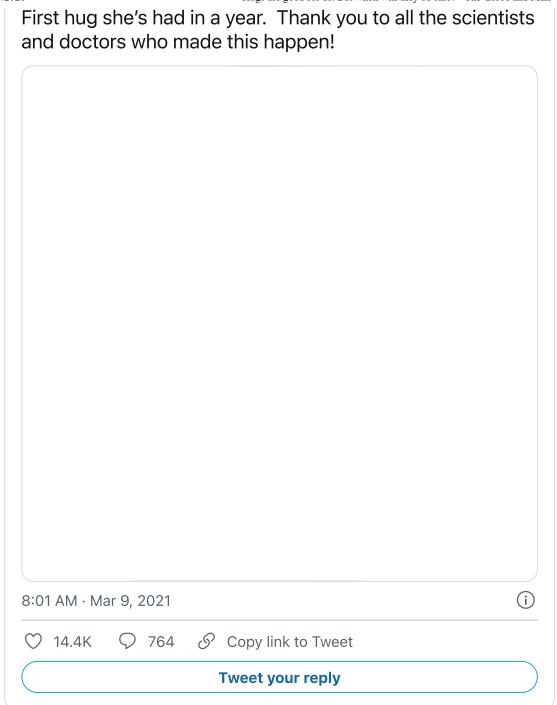
Evelyn had received her second vaccination shot in late February. But she was still staying at least six feet apart from her loved ones even though she hadn't hugged them in nearly a year.

When the U.S. Centers for Disease Control and Prevention announced in early March that fully vaccinated people can hug without masks, Evelyn wasn't convinced. So her granddaughter, a

teacher who was also fully vaccinated, got their family doctor to write a prescription for Evelyn. "You are allowed to hug your granddaughter," it said.

Standing in her apartment with her arms wrapped around her granddaughter, Evelyn began to sob. The sound of her crying was something Ms. Shaw says she has never heard before. "It was almost like she was wailing. It was this combination of weeping for what she has lost and what she's just got back."





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